Porex Filtration Division

20nm Ultrafilter

Porex introduces the next advancement in Tubular Membrane Filters (TMF™) designed for demanding ultrafiltration applications.

The Porex 20 Nanometer Ultrafilter

This advanced filter technology is well suited for such applications as wafer grinding where fine, abrasive silicon particles and colloidal silica particles range between 20 – 50 nanometers (0.02 – 0.05 microns). The silicon micro-particles are very sharp and can quickly damage many types of membrane materials.

Porex 20nm membranes incorporate the same robust membrane-to-substrate bond as standard Porex TMF membranes, which are engineered for excellent performance, high strength and durability – making it the ideal choice for wafer grinding applications worldwide. Other performance features include:

- Optimal Solids Separation
- High Flux Rates
- Highly Resistant to Abrasives & Chemicals

Designed specifically for:

- Wafer grinding
- Solar panel and glass grinding
- Any application involving fine, abrasive particle removal
- Also suitable for dewatering oil emulsions

Chemical Resistance

POREX TMF modules are resistant to a broad spectrum of corrosive chemicals and reagents as well as pH ranges of 0 to 14. Typically, pilot feasibility tests are needed to determine the actual TMF module performance under real operating conditions.

See reverse side of sheet for specifications and ordering information.
## 20nm Ultrafilter Specifications and Ordering Information

### 37 Tube

#### Physical Specifications

<table>
<thead>
<tr>
<th>Modules</th>
<th>Housing Diameter</th>
<th>Lipcoat</th>
<th>Retentate Ports</th>
<th>Mounting Required</th>
<th>Max Pressure</th>
<th>Weight</th>
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<tbody>
<tr>
<td>37 Tube</td>
<td>6&quot; Sc40</td>
<td>0.875&quot; x 1.89&quot; L pipe stub</td>
<td>6&quot; pipe Anvil Gruvlok groove</td>
<td>Horizontal; 2 point</td>
<td>21 psi at 70°F</td>
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#### Gruvlok Coupling Specifications

- **Gruvlok Model**: Anvil 7001 Standard Coupling
- **Sized**: 6 in.
- **Standard Gasket Material**: Grade E (EPDM) suitable for most applications
- **Approx. Weight Each**: 11.8 lbs (5.4 kg)

#### Vitaulic Coupling Specifications

- **Vitaulic Model**: 77 or 75 flexible coupling
- **Sized**: 6 in.
- **Standard Gasket Material**: Grade E (EPDM) suitable for most applications
- **Approx. Weight Each**: 7 lbs (3.2 kg)

#### Operating Specifications

- **Pre-Use Wetting Agent**: IPA
- **Water Flux**: >200 GFD (340 LMH)
- **Cross Flow Liquid Velocity**: 10 – 16 ft/sec
- **pH Range**: 0 – 14
- **Max Backpulse Pressure**: 20 psi (138 kPa) at 25°C
- **Max Differential Pressure**: 120 psi (827 kPa) at 25°C
- **Max Solids**: 18%
- **Min Solids**: 0.25%
- **Max Viscosity**: 50 cp
- **Min Viscosity**: <1 cp

#### Maximum Cleaning Solution Strength

- **Bleach (NaOCl)**: < 17% to 100°F (38°C)
- **Caustic (NaOH)**: < 15% to 104°F (40°C)
- **Acid (HCl)**: < 15% to 140°F (60°C)
- **Peroxide (H2O2)**: < 5% to 100°F (38°C)

#### Ordering Information

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<th>Maximum Continuous Operating Temperature*</th>
<th>Housing</th>
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<td>UHMWP</td>
<td>15 x 10 x 75.5</td>
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